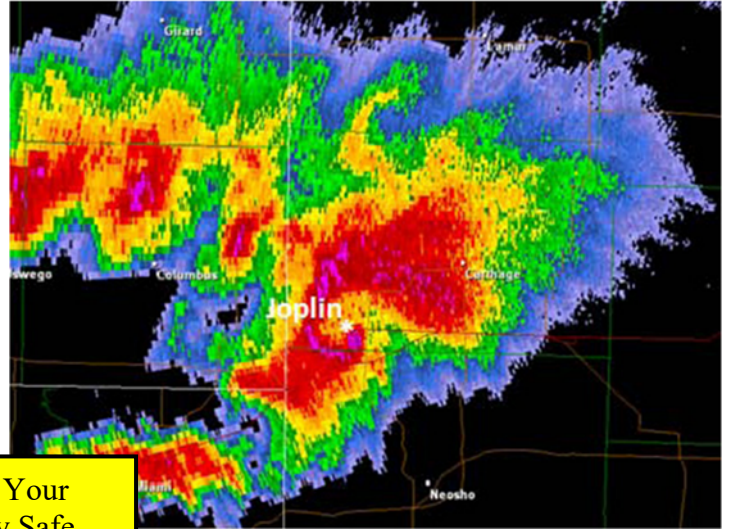
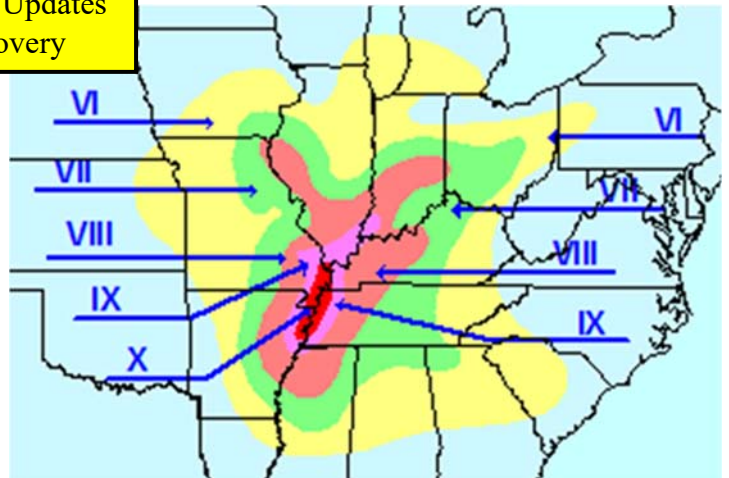
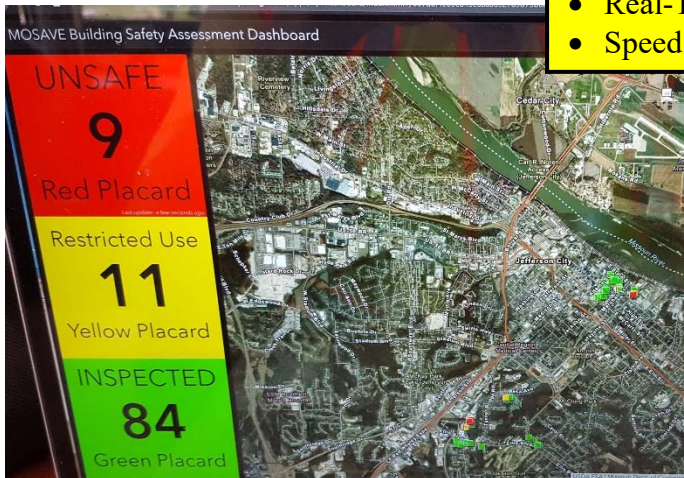


Local Public Agency Guide to Utilizing Missouri's **S.A.V.E. Coalition** to Perform Post-Disaster Building Safety Evaluations



- Help Keep Your Community Safe
- Real-Time Updates
- Speed Recovery



Missouri
State Emergency Management Agency

and the

Structural Assessment and
Visual Evaluation
(SAVE) Coalition

December 4, 2020

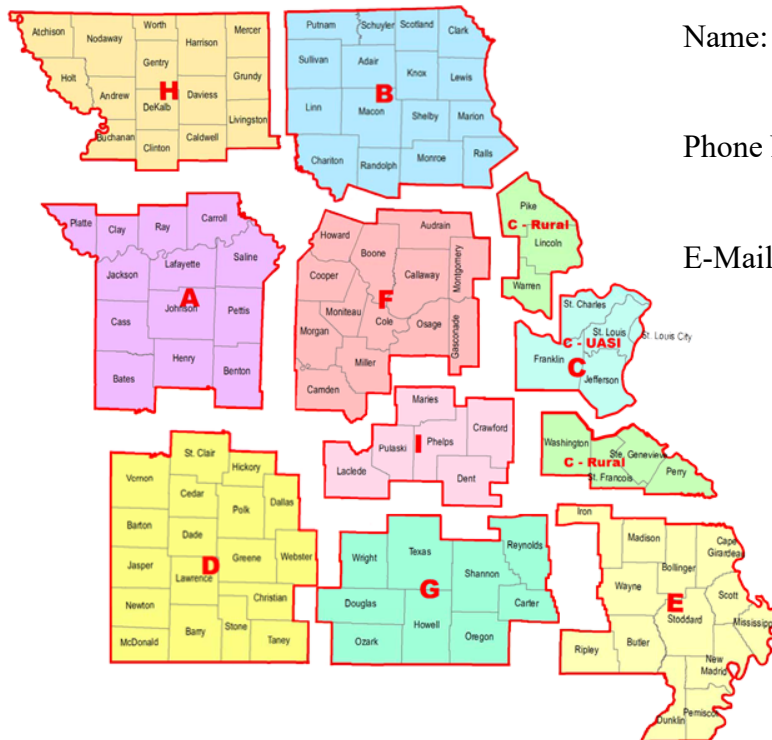


STATE EMERGENCY MANAGEMENT AGENCY CONTACTS:

24-Hour Operations Desk

573-526-9100

Know your Regional Coordinator: https://sema.dps.mo.gov/programs/area_coordinator.php



Name: _____

Phone Number: _____

E-Mail: _____

SAVE Coalition Website <https://sema.dps.mo.gov/programs/SAVEcoalition.php>

State Emergency Management Agency (SEMA) Earthquake Program Manager (SEMA's SAVE Coalition Liaison):

Jeff Briggs
Office: 573-526-9232
Cell: 573-301-7752
Jeff.Briggs@sema.dps.mo.gov

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Cover Photo credits (clockwise from top left):

SAVE member posting building placard during 2011 Joplin EF-5 Tornado SAVE Deployment – photo by Jeff Hower; Weather Radar Joplin Tornado - National Weather Service; Modified Mercalli Earthquake Intensity Map for a 7.6M Earthquake; Real-Time results dashboard from ESRI Collector App – SAVE Deployment to 2019 Jefferson City EF-3 Tornado

Local Public Agency Frequently Asked Questions

1. **Who is the SAVE Coalition?** – Formed in 1991 with the passage of RSMo Section 44.023, the Structural Assessment and Visual Evaluation (SAVE) Coalition is a group of approximately 1,000 volunteer *architects, engineers, and building officials* trained to respond quickly to disasters including tornado/high wind, earthquake, or flash flood. SAVE is a state-level resource working under the State Emergency Management Agency (SEMA). SEMA is the only agency that can deploy SAVE members. Workers Compensation insurance for SAVE members is provided by the State of Missouri.
2. **What does SAVE do?** – All SAVE Coalition members have completed 7 hours of nationally recognized training to perform post-disaster building safety evaluations to determine if the damaged building is structurally safe for continued use. SAVE members post one of the following placards on evaluated buildings to warn building occupants:



- 2.1. Red UNSAFE placard means: “Extreme hazard or unsafe situation present. Significant risk of further damage or collapse. **Unsafe for occupancy or entry, except as authorized by the local building department.** (Note: Posting a building Unsafe is not a demolition order.)”



- 2.2. Yellow RESTRICTED USE placard means: “Safety is questionable or hazardous conditions exist (or are believed to exist) that require restrictions on the occupancy or use of the structure. **Entry and use have been restricted as indicated on the placard.** (Note: Further evaluation may result in the building being posted as either Inspected or Unsafe.)”



- 2.3. Green STRUCTURALLY INSPECTED placard means: “No apparent hazard found, although repairs may be required. Original lateral- and vertical-load capacity not significantly decreased. No restriction on use or occupancy.”

2.4. Quoted information is from the ATC-45 Field Manual.

2.5. See Appendix pages 21-23 for full size copies of these placards.

3. **What does SAVE not do?** SAVE does NOT:
 - 3.1. Perform FEMA Preliminary Damage Assessments (monetary value estimates)
 - 3.2. Perform *Building Code* inspections
 - 3.3. Perform inspections for insurance or financial reimbursement purposes
 - 3.4. Evaluate damaged buildings outside the event area
 - 3.5. Evaluate buildings damaged by rising flood water (no lateral load damage)
 - 3.6. Evaluate building damaged by fire or ice (no lateral load damage)
 - 3.7. Recommend how to make building repairs

- 4. Where does SAVE deploy?** - Anywhere in Missouri
- 5. When can SAVE deploy?** – The Governor must declare an emergency prior to SAVE deploying.
- 6. What does the Local Public Agency (LPA) need to do or provide?**
 - 6.1. Ask SEMA to deploy the SAVE Coalition
 - 6.2. Execute the Memorandum of Agreement
 - 6.3. Designate a local point of contact
 - 6.4. Estimate of the number of buildings to be evaluated
 - 6.5. Deputize the SAVE members as local building officials
 - 6.6. Credentials to access the disaster area
 - 6.7. Transportation within the disaster area
 - 6.8. Reimbursement for expenses travel/lodging/food reimbursement
 - 6.9. Any required follow-up action with building owners following placard posting
- 7. How long does it take SAVE to deploy?**

48 hours after the request is made to SEMA is ideal.
- 8. How many people will SAVE send?** The total deployment number is based on:
 - 8.1. the size of the event and number of damaged buildings,
 - 8.2. LPA's ability to support the SAVE members (LPA staff, food, lodging, etc.)
- 9. Who leads the SAVE teams?**

SAVE On-Site Leaders with specialized training and Incident Command System knowledge.
- 10. Do property owners/occupants need to be present?** No. Most SAVE building evaluations are exterior only, so access inside the building is generally not needed.
- 11. How much does it cost to deploy SAVE?**

SAVE members are volunteers who do not get paid for their time. SAVE members' out-of-pocket expenses for travel, food, and lodging are reimbursed by the LPA.
- 12. How does the LPA reimburse SAVE members?**

In the past most SAVE members have completed LPA vendor forms (W-9's), submitted their expenses, and the LPA mails checks.
- 13. What deliverables does SAVE leave with the LPA?**
 - 13.1. Placards posted on the evaluated building
 - 13.2. Documentation for each evaluated building in the form of:
 - 13.2.1. ESRI Collector App data – with real time results (preferred method)
 - 13.2.2. Paper Report Forms
 - 13.3. Optional data can include the GPS track logs for each team
 - 13.4. Google Earth data points (used to create a Common Operating Picture) if Collector App is not used

SAVE Deployment Process for Local Officials

1. Evaluate the building damage and need for outside resources.
2. Request local mutual aid and contact SEMA for guidance.
3. For large events requiring many state-level resources, request an emergency declaration from the Governor.
4. **Request SEMA deploy the SAVE Coalition.** Contact your SEMA Regional Coordinator or if they are not available call the SEMA 24-hour Operations Desk 573-526-9100.
5. The SEMA Earthquake Program Manager or an experienced SAVE Leader will contact the LPA to gather initial information regarding:

EVENT OCCURS
(Local Agencies Overwhelmed)



Governor
Declares Emergency



Local Government Requests Building
Evaluation Help from SEMA



S.A.V.E. Teams Begin Deployment

- 5.1. Who will be the Local Public Agency's Point of Contact for SAVE, phone numbers;
- 5.2. Estimated types of damaged buildings needing safety evaluations (commercial, multi-story, high rise, residential);
- 5.3. Estimated number of damaged buildings, any damaged essential facilities (EOC, shelters, hospitals, Police/Fire Stations, pharmacies, grocery and hardware stores, etc.)
6. SAVE will appoint a trained leader to serve as SAVE's On-Site Leader who will work closely with the LPA's Local Point of Contact to gather additional information and complete the following steps prior to SAVE members deploying to the disaster site. This information is also found in the *Initial Contact Checklist* in the Appendix page 14.
 - 6.1. **SAVE MOA.** The attached Memorandum of Agreement needs to be executed by an LPA official authorized to execute agreements on behalf of the LPA (see Appendix page 18). This agreement has been reviewed by Missouri Department of Public Safety attorneys for conformance with applicable state law.
 - 6.2. **Confirm Meeting Location.** Determine exactly where the LPA wants SAVE members to report (i.e. building address and room number), confirm:
 - 6.2.1. Size of the room (capacity for appropriate number of SAVE members),
 - 6.2.2. Telephone and internet availability,
 - 6.2.3. Driving directions and details for parking personal vehicles.

City Hall conference rooms, City Council Chamber, Public Works Garage, and Fire Stations are all possible meeting locations.

SAVE members will use the Meeting Location to sign in, complete needed paperwork, conduct briefings prior to deploying to the field, and internally manage the SAVE deployment.

- 6.3. **Vendor Setup and/or Human Resources Paperwork.** What forms (e.g. W-9) or other paperwork the LPA needs SAVE members to fill out for expense reimbursement, etc. (see MOA item 12 under Local Jurisdiction Responsibilities). If possible, send the paperwork to the SAVE volunteers prior to deployment.
- 6.4. **Deputize SAVE Members.** Discuss how the Local Agency plans to deputize the SAVE members as deputy building officials. This can be very informal or by an official resolution.
 - 6.4.1. Local Official administers an oath at the start of the deployment: “I, state your name, do solemnly swear (or affirm) that I will faithfully execute the office of temporary building inspector for (Local Agency).”
 - 6.4.2. See the Appendix page 19 for an example resolution that can be executed by the Mayor or County Commission listing all of the deployed SAVE members.
- 6.5. **Maps and Inspection Paperwork.** Discuss SAVE inspection forms (See Appendix page 20) and building posting criteria. Find out what maps are available: Search and Rescue grid map, aerial photos with building street address, street maps, etc. Have forms, maps, and placards ready before the SAVE members arrive.
- 6.6. **Discuss SAVE Incident Action Plan.** Discuss how and where the SAVE members will be deploying (i.e., escorted by local officials to each building, use search and rescue grid maps and inspect all buildings in each grid, other methods)
- 6.7. **Inspection Limits.** Confirm any geographic limits for SAVE’s work (i.e., only in the City limits). Need separate MOA for each jurisdiction. SAVE only evaluates event-caused damage.
- 6.8. **Number and Priority of Buildings.** Re-confirm estimated number of buildings to be inspected by SAVE. Are there any priority/essential structures that should be evaluated first (hospitals, fire/police stations, shelters, etc.)?
- 6.9. **Field Communications.** Discuss how SAVE members will communicate in the field (i.e., cell phones to call 911 for emergencies, fire department radio, etc.).
- 6.10. **SAVE / Local Public Agency Communications.** What time and how does SAVE report results to the LPA? Does the LPA need a report from SAVE by a certain time to include in briefings, social media releases, press conferences, etc.?
- 6.11. **Transportation.** Confirm the LPA will transport the SAVE members to and from the damaged buildings. Water should be provided in the vehicles for SAVE.
- 6.12. **Food/Lodging.** Confirm details (This is the Local Public Agency’s responsibility).

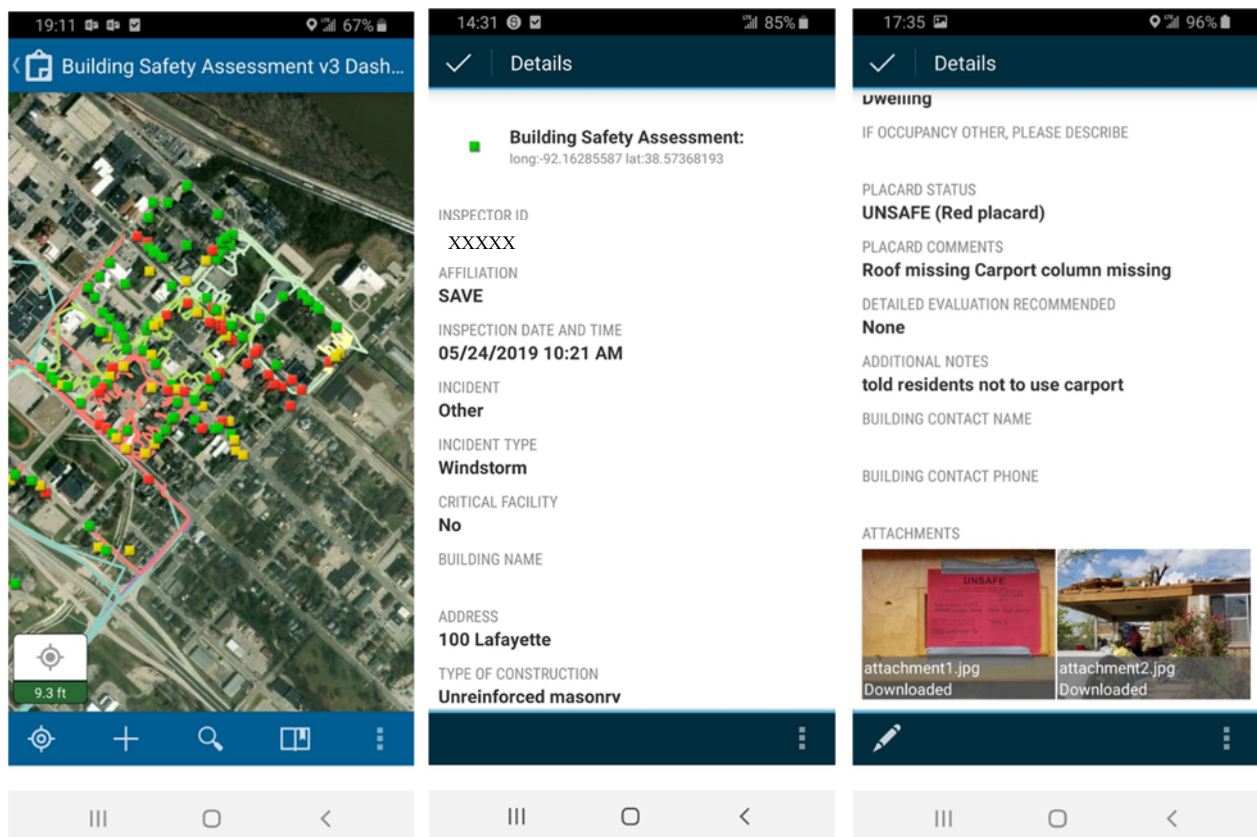
Details on SAVE Deliverables

In addition to the placards posted on buildings, the following products can be provided by the SAVE Coalition to the LPA:

Paper Inspection Forms – Example forms are found in the Appendix page 20. These ATC forms provide lots of information, but take longer to fill out, and the data on the forms is more difficult to share and use than electronic methods.

ESRI Collector App Data (Preferred Method) – This is a smart phone or tablet application that allows SAVE members to enter much, but not all, of the data from the paper forms into the application. Photos of the damaged building can also be uploaded. All data is stored in a GIS database for easy sharing and retrieval. If cell coverage is available, the data is uploaded in real time to an internet dashboard (see photo on cover). Device charging in the field is a limitation.

The LPA would need GIS capabilities to use this data. SEMA may be able to offer limited GIS support following some events.



Screen Shot showing red, green and yellow dots to correspond to the placard color.

Screen shot showing some of the data collected by the Collector App.

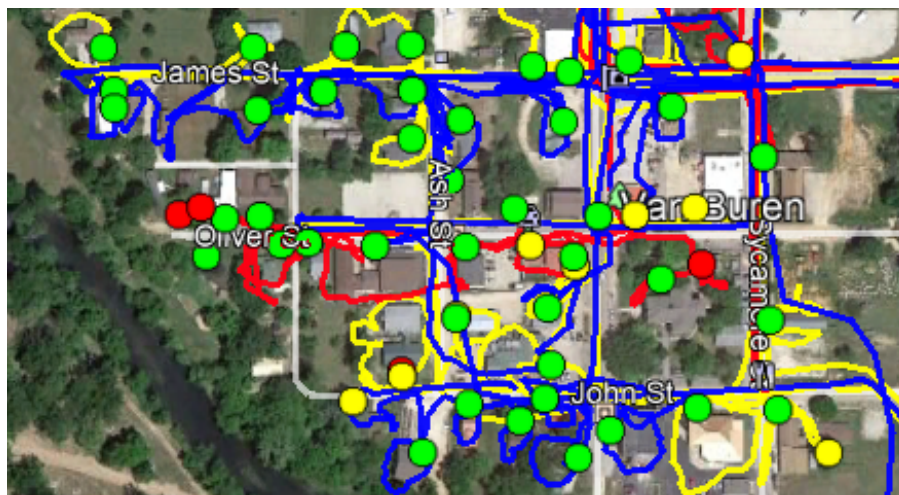
Screen Shot showing example pictures that can be uploaded and georeferenced by the Collector App.

GPS Track Logs and Symbols – This data is collected by the SAVE teams using Garmin GPS receivers supplied by SAVE and is not dependent on cell phone availability or re-charging in the field. The symbol color corresponds to the placard colors and can be used to create a Common Operating Picture using Google Earth if GIS support is not available. If the ESRI Collector App is used the duplicate symbols will not be collected on the Garmin.

The track logs show the route walked by the SAVE team member carrying the GPS receiver. Track logs are not currently supported by the ESRI Collector App. This data is more prone to operator error than the Collector App and is not uploaded in real time.



Green lines are the track log collected by the Garmin GPS receiver for this SAVE team. Placard color symbols were not collected because the ESRI Collector App was being used.



Example Google Earth screen shot with track logs and custom symbols.

SAVE Information for the Public

The Local Public Agency should plan to issue press releases and social media posts to inform the public about the SAVE Coalition deployment and the meaning of the placards. An example press release is included in the Appendix page 24.

SAVE members will be briefed on interactions with the media (e.g., all media inquiries shall be directed to the local Public Information Officer) prior to deploying to the field.

SAVE Coordination with other Agencies

There are several groups with a role in post-disaster building assessments: SAVE, FEMA Urban Search & Rescue Task Forces, and the American Red Cross for example. The Missouri SAVE Coalition is capable of deploying large numbers of licensed professional engineers, architects, and building officials to perform post-disaster building safety assessments. During past deployments, SAVE has worked within the local building department, under the Fire Department (Incident Commander), and with the County Public Works and Sheriff's Departments. All of SAVE's leaders have taken FEMA Incident Command System Training, so SAVE can easily integrate into any level of the Incident Command system that the LPA has implemented.

SAVE maintains sign-in sheets so the total number of volunteer hours can be tabulated and used as an in-kind match for any FEMA funding opportunities.

FEMA Urban Search & Rescue (US&R) Task Forces - involves the location, rescue (extrication), and initial medical stabilization of individuals trapped in confined spaces. Structural collapse is most often the cause for people being trapped, but individuals may also be trapped in transportation accidents, mines, and collapsed trenches. Missouri has a FEMA Urban Search and Rescue Task Force, **Missouri Task Force 1 (MO-TF1)**, based in Boone County. MO-TF1 has wide-area search and structural evaluation capabilities as well. Several MO-TF1 members are also SAVE Coalition leaders. Excellent communication and cooperation exist between the two groups.

If MO-TF1, or an out-of-state US&R Task Force, deploys to a disaster site before SAVE, any data developed by the Task Force would be very helpful to SAVE. This data can greatly aid in identifying the areas where SAVE needs to focus its efforts first.

To compare and contrast MO-TF1 and SAVE on several key points:

	MO-TF1	SAVE Coalition
Responder Type	First Responders	Second Responders
How Requested	Requested through SEMA	Requested through SEMA
Response Time to start deployment	4 hours after SEMA request	48 hours after SEMA request - preferred
Working Hours	24-hours a day	Daylight only

	MO-TF1	SAVE Coalition
Self-sufficient	Yes, for 72 hours	No – requires logistical support
Cost to LPA	None – SEMA pays all costs	Travel/food/lodging reimbursement
Focus of Structural evaluations	Focused on short term building stability for rescue efforts and temporary shoring design; typically building markings are for use by rescuers only.	Focused on longer term structural safety; ATC-20/45 three color placard system to communicate with the building occupants and public.
Real time data updates	Yes, with multiple ESRI products (e.g. Survey123). MO-TF1 has access to more robust communication systems.	Yes, with the ESRI Collector App and working commercial cellular network
Garmin GPS Track Logs and Symbols	Yes	Yes

LPA Actions to Take Prior to a Disaster

There are several important steps LPAs can take prior to a disaster in your community, including:

1. Encourage your building department staff and public works civil engineers to take the free 7-hour SAVE basic training class. See SAVE's website for class dates and locations <https://sema.dps.mo.gov/programs/SAVEcoalition.php>
2. Encourage your building department supervisors and other engineer or architect professional staff to take the free SAVE On-Site Leader class.
3. Encourage key staff to take FEMA's free Incident Command System training on-line.
4. Develop and enforce a local building code with at least minimal load path requirements to connect the roof to the walls (hurricane clips) and the walls to the foundation (anchor bolts).



5. Educate the community about natural disaster risk and participate in the statewide Annual Shake-Out drill.
6. Consider if/how Law Enforcement will be involved with the post disaster building safety evaluation process. On most past deployments, SAVE has not been escorted by law enforcement officers. On the May 2019 Cole County tornado deployment, Sheriff's Deputies escorted the SAVE teams and really sped up the process since the Deputy was able to talk to the residents and explain who SAVE was and why we were there.



Sheriff's Deputy Escorting
SAVE Members

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APPENDIX



Words ▾

1st search term

And ▾

2nd search term

**Effective 28 Aug 2016 Chapter 44**

Title V MILITARY AFFAIRS AND POLICE

44.023. Disaster volunteer program established, agency's duties — expenses — immunity from liability, exception. — 1. The Missouri state emergency management agency shall establish and administer an emergency volunteer program to be activated in the event of a disaster whereby volunteer architects, engineers licensed under chapter 327, any individual including, but not limited to, building officials and building inspectors employed by local governments, qualified by training and experience, who has been certified by the state emergency management agency, and who performs his or her duties under the direction of an architect or engineer licensed under chapter 327, and construction contractors, equipment dealers and other owners and operators of construction equipment may volunteer the use of their services and equipment, either manned or unmanned, for up to five consecutive days for in-state deployments as requested and needed by the state emergency management agency.

2. In the event of a disaster, the enrolled volunteers shall, where needed, assist local jurisdictions and local building inspectors to provide essential demolition, cleanup or other related services and to determine whether structures affected by a disaster:

- (1) Have not sustained serious damage and may be occupied;
- (2) Must be restricted in their use pending repairs; or
- (3) Are unsafe and shall not be occupied pending repair or demolition.

3. Any person when utilized as a volunteer under the emergency volunteer program shall have his or her incidental expenses paid by the local jurisdiction for which the volunteer service is provided. Enrolled volunteers under the emergency volunteer program shall be provided workers' compensation insurance by the state emergency management agency during their official duties as authorized by the state emergency management agency.


4. Emergency volunteers who are certified by the state emergency management agency shall be considered employees of the state for purposes of

the emergency mutual aid compact under section 44.415 and shall be eligible for out-of-state deployments in accordance with such section.

5. Architects, engineers, individuals including, but not limited to, building officials and building inspectors employed by local governments, qualified by training and experience, who have been certified by the state emergency management agency, and who perform their duties under the direction of an architect or engineer licensed under chapter 327, construction contractors, equipment dealers and other owners and operators of construction equipment and the companies with which they are employed, working under the emergency volunteer program, shall not be personally liable either jointly or separately for any act or acts committed in the performance of their official duties as emergency volunteers except in the case of willful misconduct or gross negligence.

6. Any individuals, employers, partnerships, corporations or proprietorships, that are working under the emergency volunteer program providing demolition, cleanup, removal or other related services, shall not be liable for any acts committed in the performance of their official duties as emergency volunteers except in the case of willful misconduct or gross negligence.

(L. 1991 S.B. 265 § 1, A.L. 2002 S.B. 712, A.L. 2016 S.B. 732)

< end of effective 28 Aug 2016 > 

[use this link to bookmark section 44.023](#)

- All entries

	Effective	End
44.023	8/28/2016	
44.023	8/28/2002	8/28/2016



In accordance with Section **3.090**, the language of statutory sections enacted during a legislative session are updated and available on this website **on the effective date** of such enacted statutory section.

[Contact](#)

Other Information

[Tables and Forms](#)

[Sections with
Definitions](#)

S.A.V.E. Initial Contact Check-List

Updated: May 24, 2020

- ☐ **Local Agency Contact Name:** _____
Position Title: _____
Office Phone: _____
Cell Phone: _____
Fax Number: _____
E-mail: _____
- ☐ **SAVE MOA.** Sign the Memorandum of Agreement. Send signed copy to Statewide Coordinator.
- ☐ **Confirm Meeting Location.** Find out: exactly where they want SAVE members to report (ie. building room number), size of the room (capacity for appropriate number of people?), telephone and internet availability, driving directions, and details for parking personal vehicles.
- ☐ **Human Resources Paperwork.** Ask the Local Agency what forms or other paperwork they need us to fill out for expenses reimbursement, etc. (MOA items 12 under Local Jurisdiction Responsibilities). Often times the Local Agency has us fill out a standard employment application or vendor account forms. If possible send the paperwork to the SAVE volunteers prior to deployment.
- ☐ **Deputize SAVE Members.** Discuss how the Local Agency plans to deputize the SAVE members as deputy building officials. This can be very informal. Example:

I, state your name, do solemnly swear (or affirm) that I will faithfully execute the office of temporary building inspector for (Local Agency).
- ☐ **Collector App, Maps and Inspection Paperwork.** Explain Collector App, standard SAVE inspection forms and building posting criteria. Find out what maps are available: Search and Rescue grid map, aerial photos with street addresses, street maps, etc. Have forms and maps ready before the SAVE members arrive.
- ☐ **Discuss SAVE Incident Action Plan.** Suggest method of deploying SAVE Strike Teams (ie. Use search and rescue grid maps and inspect all buildings in each grid.)
 - ☐ **Inspection Limits.** Confirm geographic limits of SAVE's work (ie. only in the City limits, City/County).
 - ☐ **Number and Priority of Buildings.** Confirm estimated number of buildings to be evaluated by SAVE. Are there any priority/essential structures (hospitals, fire/police stations, shelters, pharmacy, etc.)?
 - ☐ **Field Communications.** They may have an overall Incident Action Plan that would include all pertinent communication information. (ie. cell phones to call 911 for emergencies, fire department radio, etc.).
 - ☐ **SAVE / Local Agency Communications.** What time and how does SAVE report results to the Local Agency? Review Daily Briefing and Debriefing agendas and demobilization plans. Local Agency press release and social media regarding inspection placards?
 - ☐ **Transportation.** Confirm the Local Agency and/or National Guard will transport the SAVE members to and from the damaged buildings. Water should be provided in the vehicles for SAVE.
 - ☐ **Food/Lodging.** Confirm details with Local Agency (This is the Local Agency's responsibility).
- ☐ **Recon.** Make a field reconnaissance of the damage area so you can brief the SAVE members on what they will see and do.
- ☐ **Update SAVE Statewide Coordinator and/or Alternate Statewide Coordinators.** Establish a regular communication schedule (during regular business hours, at least once in morning and at end of shift).

SAVE COALITION

MEMORANDUM OF AGREEMENT



This Agreement is entered into on _____ (date) between _____ (Local Jurisdiction) and the Structural Assessment and Visual Evaluation Coalition (SAVE) to define the relationships between the parties and to describe the responsibilities of each of the parties.

GENERAL

SAVE's objective is to assist the Missouri State Emergency Management Agency (SEMA) in the execution of its responsibilities with respect to the use of qualified volunteers in the emergency assessment of buildings following catastrophic events. The assessments of buildings and vertical structures will be performed by a group of architects, professional engineers, and other qualified volunteers as established in section 44.023, RSMo (hereinafter referred to as SAVE volunteers).

Due to the continuing threat of disasters, including earthquakes, tornadoes, floods and terrorism, there is a need for a means to assist the state and local governments in assessing the safety and serviceability of buildings within their jurisdictions. Following catastrophic events, unsafe buildings of all types pose serious hazards to their occupants.

Under such conditions, it is essential that a process be in place to provide a quick and organized response so as to assess the occupancy risk of buildings. The following material outlines agreement for the provision of SAVE volunteers with experience and training in building design and construction to structurally assess buildings and vertical structures following catastrophic events.

When activated by SEMA, the use of SAVE volunteers is limited to the assessment of buildings and related structures. Other structures, such as highways, roads, bridges, railroads, utility lines, pipelines, sewage and water lines and systems, railroads, airports, dams, and reservoirs shall be assessed by their owner or appropriate regulatory agency.

This document is part of the continuing cooperative effort involving SEMA and structural professional organizations collectively called the SAVE Coalition, as outlined in the SAVE Coalition's Administration Plan (last revised, March 2017).

SAVE volunteer inspectors will be architects or professional engineers registered under Chapter 327, RSMo and other individuals qualified by training and experience who have completed the required training (ATC-20 Post Earthquake Safety Evaluation of Buildings), and have been certified and credentialed by SEMA.

SAVE RESPONSIBILITIES

SAVE agrees to the following:

1. In the event of a disaster, enrolled SAVE volunteers will, where needed, assist local jurisdictions and local building inspectors by performing inspections/ assessments to determine whether buildings adversely affected by a disaster:
 - Have not sustained serious damage and may be occupied safely;
 - Have sustained damage and must be vacated or partly vacated pending repairs; or
 - Have sustained serious damage and may not be occupied safely.
2. SAVE volunteers shall not assess any facilities other than buildings and vertical structures.
3. SAVE volunteers shall not assess any facilities other than those potentially damaged by the disaster.
4. Once the inspections are complete, the SAVE volunteers depart and SAVE is deactivated, SAVE volunteers will not return to reinspect, arbitrate, resolve or answer disputes.

LOCAL JURISDICTION RESPONSIBILITIES

Local Jurisdiction also agrees to do the following:

1. Assess the extent and severity of the damage, and determine the need for qualified volunteers.
2. Make all requests for SAVE volunteer assessments through SEMA, in order to ensure coordination of services across multiple disaster areas and ensure documentation of services provided.
3. Submit requests for SAVE activation of volunteers through official channels to SEMA, using when possible the format provided by SEMA/E-Team. Such requests shall include as much of the requested information as is available.
4. Not operate individually outside of the SEMA system; however, this does not in any way limit or restrict business relationships or contracts between local jurisdictions and private clients or entities.
5. The names of volunteers will not appear on released copies of assessment forms; nor will their names be identified or released in relation to specific assessment reports without prior approval of the volunteer, unless requested under the parameters outlined in Missouri's Sunshine Law or otherwise required by law.
6. Identify/appoint an Incident Commander and name other key officials who will be the coordination link with SEMA and SAVE's designated representative(s).
7. Identify structures by priority for emergency operations and provide this information to SEMA and the SAVE representative(s) on site.

8. Designate and provide for the SAVE volunteers an assembly or meeting/work place from which to report, organize, and operate.
9. Designate SAVE volunteers as representatives of the jurisdiction to facilitate their movement, work and acceptance by the community.
10. Provide (to the extent available) basic safety equipment, inspection equipment, vehicles, police escorts, communications, GIS and other support upon request.
11. Issue passes/local credentials, placards for posting, street maps and other documents as needed by SAVE volunteers to serve the needs of the local officials.
12. Provide to and/or reimburse SAVE volunteers for incidental expenses such as housing, food, travel mileage, and other items required to perform their assignments.
13. Ask SAVE volunteers to inspect only structures damaged by the incident.
14. Understand and refrain from asking SAVE volunteers to inspect structures when the inspection is contentious, refused or challenged by the owner of the structure. Local Jurisdiction agrees to resolve any such issues locally.

LIABILITY OF SAVE VOLUNTEERS

Qualified SAVE volunteers normally agree to be available for up to five consecutive days of service. Pursuant to section 44.023, RSMo, service as a SAVE volunteer is limited to up to five consecutive days for in-state deployments. Following any period of volunteering, SAVE volunteers will take break of at least one calendar day before providing additional volunteer service.

Section 44.023.5, RSMo, provides as follows:

5. Architects, engineers, individuals including, but not limited to, building officials and building inspectors employed by local governments, qualified by training and experience, who have been certified by the state emergency management agency, and who perform their duties under the direction of an architect or engineer licensed under chapter 327, construction contractors, equipment dealers and other owners and operators of construction equipment and the companies with which they are employed, working under the emergency volunteer program, shall not be personally liable either jointly or separately for any act or acts committed in the performance of their official duties as emergency volunteers except in the case of willful misconduct or gross negligence.

6. Any individuals, employers, partnerships, corporations or proprietorships, that are working under the emergency volunteer program providing demolition, cleanup, removal or other related services, shall not be liable for any acts committed in the performance of their official duties as emergency volunteers except in the case of willful misconduct or gross negligence.

This Memorandum of Agreement is hereby agreed to by the undersigned duly authorized representatives of the SAVE Coalition and Local Jurisdiction.

SAVE Coalition	Local Jurisdiction
Signature	Signature
Printed Name	Printed Name
Title	Title
Office Phone	Office Phone
Cell Phone	Cell Phone
Address	Address
E-mail	E-mail

Example Emergency Proclamation to Deputize SAVE Members

City/County of _____, Missouri

EMERGENCY PROCLAMATION

WHEREAS, a Declaration of Emergency has been executed pursuant to Chapter ____ of the City Code of the City of _____; and

WHEREAS, Chapter ____ of the City Code authorizes the Mayor to exercise certain exceptional powers due to an emergency, including the authority to govern the City by proclamation; and

NOW, THEREFORE, IN ACCORDANCE WITH Chapter ____ of the City Code I, _____ MAYOR'S NAME _____, Mayor, proclaim the following:

1. The following individuals are deputized to assist City of _____ officials pursuant to the SAVE program, offered through the State Emergency Management Agency, to evaluate certain structures damaged by the TORNADO/EARTHQUAKE and related storms of DATE, according to the requirements of the SAVE program:

{List SAVE Member's names}

WITNESS MY HAND this _____ day of _____, 20_____.

Mayor's NAME

ATTEST:

City Clerk

ATC-20 Rapid Evaluation Safety Assessment Form

Inspection

Inspector ID: _____

Inspection date and time: _____ ☐ AM ☐ PM

Affiliation: _____

Areas inspected: ☐ Exterior only ☐ Exterior and interior

Building Description

Building name: _____

Address: _____

Building contact/phone: _____

Number of stories above ground: _____ below ground: _____

Approx. "Footprint area" (square feet): _____

Number of residential units: _____

Number of residential units not habitable: _____

Type of Construction

☐ Wood frame

☐ Steel frame

☐ Tilt-up concrete

☐ Concrete frame

☐ Concrete shear wall

☐ Unreinforced masonry

☐ Reinforced masonry

☐ Other: _____

Primary Occupancy

☐ Dwelling

☐ Other residential

☐ Public assembly

☐ Emergency services

☐ Commercial

☐ Offices

☐ Industrial

☐ Other: _____

☐ Government

☐ Historic

☐ School

Evaluation

Investigate the building for the conditions below and check the appropriate column.

Observed Conditions:

Minor/None

Moderate

Severe

Estimated Building Damage
(excluding contents)

☐ None

☐ 0-1%

☐ 1-10%

☐ 10-30%

☐ 30-60%

☐ 60-100%

☐ 100%

Collapse, partial collapse, or building off foundation

Building or story leaning

Racking damage to walls, other structural damage

Chimney, parapet, or other falling hazard

Ground slope movement or cracking

Other (specify) _____

Comments: _____

Posting

Choose a posting based on the evaluation and team judgment. *Severe* conditions endangering the overall building are grounds for an Unsafe posting. Localized *Severe* and overall *Moderate* conditions may allow a Restricted Use posting. Post INSPECTED placard at main entrance. Post RESTRICTED USE and UNSAFE placards at all entrances.

☐ **INSPECTED** (Green placard)

☐ **RESTRICTED USE** (Yellow placard)

☐ **UNSAFE** (Red placard)

Record any use and entry restrictions exactly as written on placard: _____

Further Actions

Check the boxes below only if further actions are needed.

☐ Barricades needed in the following areas: _____

☐ Detailed Evaluation recommended:

☐ Structural

☐ Geotechnical

☐ Other: _____

☐ Other recommendations: _____

Comments: _____

RESTRICTED USE

Caution: This structure has been inspected and found to be damaged as described below:

Entry, occupancy, and lawful use are restricted as indicated below:

Facility Name and Address:

Date

Time

(Caution: Aftershocks since inspection may increase damage and risk.)

This facility was inspected under emergency conditions for:

(Jurisdiction)

Inspector ID / Agency

**Do Not Remove, Alter, or Cover this Placard
until Authorized by Governing Authority**

RESTRICTED USE

Caution: This structure has been inspected and found to be damaged as described below:

Entry, occupancy, and lawful use are restricted as indicated below:

Facility Name and Address:

Date

Time

(Caution: Aftershocks since inspection may increase damage and risk.)

This facility was inspected under emergency conditions for:

(Jurisdiction)

Inspector ID / Agency

**Do Not Remove, Alter, or Cover this Placard
until Authorized by Governing Authority**

STRUCTURALLY INSPECTED

LAWFUL OCCUPANCY PERMITTED

This structure has been inspected (as indicated below) and no apparent structural hazard has been found.

☐

Inspected Exterior Only

☐

Inspected Exterior and Interior

Report any unsafe condition to local authorities; reinspection may be required.

Inspector Comments:

Facility Name and Address:

Date _____

Time _____

(**Caution:** Aftershocks since inspection may increase damage and risk.)

This facility was inspected under emergency conditions for:

(Jurisdiction)

Inspector ID# / Agency

Do Not Remove, Alter, or Cover this Placard until Authorized by Governing Authority

FOR IMMEDIATE RELEASE

Contacts: Larry Burkhardt – City Building Official Phone Number 573-634-6410

City of Jefferson Building Department Assisted by SEMA-S.A.V.E. Coalition Building Inspectors

May 23, 2019

The City of Jefferson Building Department is being assisted through a mutual aid agreement with members of the Structural Assessment and Visual Evaluation (S.A.V.E.) Coalition. The S.A.V.E. Coalition is a group of volunteer engineers, architects and building officials from across Missouri that works under the State Emergency Management Agency to help local agencies inspect damaged buildings following natural or manmade disasters.

For residents concerned about their homes, S.A.V.E. recommend: “IF IN DOUBT, STAY OUT.”

S.A.V.E. Inspectors are performing structural inspections to identify life safety problems with damaged buildings. The inspections are being conducted in the primary damage area and immediately surrounding areas. Inspectors will place a red, yellow or green placard at the main entrance to the building following the inspection. These are exterior inspections only. Residents do NOT need to be home during the inspection. Inspectors look for structural damage such as partially collapsed buildings, buildings moved off their foundations, leaning buildings, damage to supports, falling hazards from chimneys or walls, or other hazards like gas leaks or downed power lines. Any structure with these types of damage or hazards are UNSAFE and should not be occupied until repaired.

Red placards indicate the building is severely damaged, is UNSAFE, and cannot be occupied. A yellow placard means a portion of the building is unsafe. A green placard means the building is structurally safe to occupy.

Many buildings with red placards can be repaired. The red placard is NOT a demolition order or condemnation of any kind.

A Building permit is required to make structural repairs to buildings with red placards. A permit may be required for repairs to buildings with yellow placards. Contact the City of Jefferson Building Department for additional information.

-XXX-

Guidance for Owners and Occupants of Damaged Buildings¹

This appendix is intended to provide basic information to owners or tenants of buildings that suffer earthquake damage. Guidance is provided to answer many of the typical questions that arise during the postearthquake recovery period. The issues covered include (1) the safety evaluation process and the meaning of each of the three safety evaluation postings; (2) the process of securing services to perform repairs; and (3) how to obtain aid from disaster assistance organizations.

Building jurisdictions or other agencies may adapt this chapter for use as a handout or other document if the ATC source document is credited.

A.1 Understanding Safety Assessment Procedures and Postings

If a building you own or in which you reside or work is damaged by an earthquake it should be inspected by safety evaluation personnel working for the local government building jurisdiction. You can contact the jurisdiction to request this safety evaluation. The evaluation may not be possible until a few days after the earthquake, depending on the extent of local damage and the number of available qualified inspectors and engineers assigned to your area. If substantial damage is apparent, do not wait for an official evaluation of the building: the prudent choice is to discontinue use and occupancy of the building to prevent potential injuries that may occur due to collapse or other falling hazard conditions that could occur unexpectedly or as a result of earthquake aftershocks. You may want to engage a design or construction professional at this time to inspect the damage, recommend repair work, obtain emergency permits, or begin repair work, as required. This process is discussed below in Section A.2.

When an authorized safety evaluation team from the jurisdiction does arrive it is very important to cooperate with them by providing both information about observed damage and access to the building. The first safety evaluation team to arrive will likely be conducting what is called a Rapid Evaluation. They will spend 15 to 60 minutes inspecting the property, depending on its size, complexity, and extent of damage. Their responsibility is to quickly determine if a building is safe enough to occupy,

and if not, to decide what restrictions to place on its use or entry. The inspection will result in one of three posting placards (discussed below) being placed near the entrances to the building indicating the outcome of the team's safety evaluation. The team will also record the inspection findings and posting placard determination on an evaluation form for the jurisdiction.

Unsafe Posting (Red Placard)

If damage visible from the exterior obviously poses a severe hazard for entry or occupancy, the safety evaluation team may be limited to inspecting only the exterior of the building. In such cases the posting most likely to be used is a red UNSAFE placard. This placard indicates it is unsafe to occupy or enter the building for any reason. Even when a building can be entered for inspection it is still possible that internal damage could pose dangers requiring an Unsafe posting. It is also possible that an otherwise safe building must be posted Unsafe because it is threatened by falling hazards from a nearby building. The legal questions that may arise from such a circumstance are important, but unfortunately they are beyond the scope of this document.

The UNSAFE placard is posted only when there is an immediate risk associated with entry, use, or occupancy. While its meaning may vary somewhat among building jurisdictions, it usually means that the building owner must apply for a permit to enter the building by means acceptable to the jurisdiction.

¹ Reprint of Appendix A of ATC-20-2 *Addendum to the ATC-20 Postearthquake Building Safety Evaluation Procedures*, which is available from the Applied Technology Council, 201 Redwood Shores Parkway, Suite 240, Redwood City, CA 94065 (Website: www.ATCCouncil.org)

These means may include engaging an engineer and contractor (See Section A.2 below) to assess the risks and, as necessary, remove falling hazards, shore unstable elements, provide protective scaffolding, or otherwise mitigate hazards.

It is very important to understand that the “red tag” Unsafe posting does not automatically mean that the property has been condemned or will require demolition. Indeed, rarely is damage so severe or the threat to either an adjacent property or important right-of-way so high that an order to demolish a building is issued. Local officials normally will contact and involve the building owner and the owner’s engineer or contractor in the process of making any demolition decisions and allowing for belongings removal. Some building owners may voluntarily choose to demolish their building if repairing it is clearly uneconomical, but again, this is not the usual consequence for buildings posted Unsafe.

There are several options for building owners for the removal of goods from buildings posted Unsafe, depending on the specific condition of a building and the policies of the jurisdiction.

1. The owner, with or without the assistance of a construction professional, proposes to the jurisdiction a method of how and where the building may be entered without hazard in order to remove belongings. If this method is acceptable to the jurisdiction, it allows the owner or tenants to enter the building in accordance with the method. The jurisdiction may require that a permit be obtained. It may also require that any entry be under the supervision of the jurisdiction or the construction professional, and that hard hats be worn by those entering the building.
2. At the discretion of the jurisdiction, the owner takes out an emergency permit to perform sufficient work on the building to make it safe to enter to remove belongings. The owner will need to present a hazard mitigation and entry plan that is satisfactory to the jurisdiction. The jurisdiction may require that licensed engineers or contractors prepare this plan and supervise its execution. This plan might include shoring of parts of the building, removal of falling hazards, construction of overhead barriers, or other means that permit safe entry to all or part of the building. This plan may or may not be a part of an overall plan to repair the building.
3. The jurisdiction may believe that the building is so precarious that no hazard mitigation measures are possible that would permit even limited entry to remove belongings. This can occur when the building condition creates an undue risk even to workers attempting to mitigate the hazards. The jurisdiction should invite the owner and the owner’s professional construction consultants to propose a mitigation and entry plan. If no hazard and mitigation plan can be proposed that is satisfactory to the jurisdiction, the building would have to be demolished with the belongings still inside. The urgency of this determination will depend on whether the building threatens an adjacent property or important right-of-way.

Jurisdictions have often taken an active role in expediting the above options when the building owner has been unwilling or unable to perform. In the case of tenant demands for access and owner inaction, the jurisdiction may mitigate hazards as necessary to allow for limited belongings access. The jurisdiction may proceed with demolition if the need is pressing and the owner is uncooperative.

Restricted Use Posting (Yellow Placard)

An intermediate posting called Restricted Use is used by the evaluation team to address situations where a clearly unsafe condition does not exist but the observed damage precludes unrestricted occupancy. Unlike the Unsafe posting, the Restricted Use posting does not usually require that the owner obtain a permit to allow entry. For example, if the evaluation reveals damage of a nature that requires that there be no entry to a portion of the building or some restriction on the use or occupancy of the whole building, the yellow RESTRICTED USE placard will normally be used.

Examples of nonstructural damage that could lead to a Restricted Use posting include the loss of use of basic sanitary facilities due to broken water or sewer pipes or damage to a fire sprinkler system required for safe full occupancy. Localized structural damage may place a portion of a building in an unsafe condition while other areas remain usable. Overall damage may be such that entry is appropriate for occupants to remove belongings and for contractors to make repairs, but is not appropriate for normal

occupancy. A description of the limits or conditions of continued use will be written on the RESTRICTED USE placard. If you are present when a Restricted Use posting is made, you should ask the inspectors for a clear explanation of the limits placed on entry or occupancy and this verbal explanation should be consistent with the limits as written on the placard. If you return to your property and find a RESTRICTED USE placard that does not adequately explain the limits of entry or use, you should contact the jurisdiction for more specific information before entering the building.

When there is damage that is not a safety hazard but is detrimental to the quality of health or living conditions for long-term occupancy, the jurisdiction may have instructed the inspectors to place a Restricted Use placard. No occupancy or use restrictions would be stated, but the placard would note that the owner must correct the listed deficiencies under a permit.

In addition to posting the entire building, posting may be necessary at specific locations outside a building. In situations in which a potential falling hazard exists, the immediate area below that part of the building may be marked or otherwise barricaded with yellow tape having a message that reads *Do Not Cross Line, Restricted Area—Keep Out*, or similar cautionary wording. Damaged masonry chimneys, parapets, or veneers above outside spaces are examples of falling hazards requiring such barricading.

Inspected Posting (Green Placard)

Where damage does not pose any significant safety hazard, the proper posting should be a green INSPECTED placard. This posting is intended only to inform occupants that the building may be safely occupied; it does not imply that existing damage should be ignored or that repairs are not necessary.

If the inspection team was not able to enter the building but found no hazards at the exterior, the INSPECTED placard will be marked “Exterior Only.” If the inspection team was also able to enter the building and found no hazards, the INSPECTED placard will be marked “Exterior and Interior.” If you return to your building and find an INSPECTED placard marked “Exterior Only,” you should request a reinspection if you believe there are hazards inside the building.

Posting Changes

It is possible that subsequent aftershocks could create new damage or increase the initial damage, causing the need for an Inspected or Restricted Use posting to be changed to a more restricted level of use. If you have evidence that an aftershock has substantially increased damage to your building, you should contact the building inspection office to schedule a reinspection. It is likely that the building inspection office will consider the reinspection of posted buildings after a major aftershock, even if reinspections are not requested by the owner.

The Rapid Evaluation team may decide that a more extensive inspection is needed. They will post the building to their best judgment, but they will also request what is called a Detailed Evaluation. The jurisdiction may also require that all Unsafe and Restricted Use postings by Rapid Evaluation teams receive a Detailed Evaluation as a second opinion to ensure that the restrictions on your property use are appropriate. The Detailed Evaluation team will have more time and will have specialist members to conduct a more thorough investigation that may result in a posting different from that given by the Rapid Evaluation team. In the meantime, however, the posting by the Rapid Evaluation team must be observed.

A.2 Steps to Take to Ensure Damage Is Properly Repaired

If your building is damaged in an earthquake and appears repairable, you will need to assess the damage, determine what efforts are necessary for reoccupancy, and begin these efforts. You will probably need the services of design and construction professionals and permits from the local building jurisdiction. Your choice of which construction professional to initially contact will depend on your preliminary assessment of the repair and hazard mitigation needs, your knowledge and acquaintance with the local professionals, and their availability.

You may begin the engagement of design and construction professionals at any time, that is, you need not wait until the Rapid and, if done, Detailed Evaluations are completed. The jurisdiction will usually allow the entry and occupancy of a building to be determined by a design professional engaged by the owner, if their written and signed occupancy recommendations appear reasonable and are posted on the building.

Most architects, contractors, and engineers belong to either a regional or state association that can provide names, phone numbers, and perhaps some information on the type of work in which their members specialize. The building inspection office may also provide similar lists but it is very unlikely that they will offer to recommend any specific firm. Recommendations are perhaps best sought from other individuals, business associates, family, friends, or neighbors who have recently used the services of the type of professional you are seeking. In certain cases an engineering geologist may also be needed when a building site is steeply inclined or has certain soil conditions that must be considered in the repair design.

After reviewing the recommendations for and availabilities of architects, contractors, or engineers, you can then begin the process of engaging them. When widespread damage occurs, the resulting demand for construction repairs may cause even legitimate local construction professionals to charge higher prices than would normally be expected. Obtaining several bids for the needed repair work can help secure a more reasonable price. Prior to signing any contract to perform repairs or other services, be sure that it contains a complete description of the scope of work and requires that a building permit be obtained. Contractors often require that a percentage of the full contract price be paid before beginning work, but it is generally neither necessary nor prudent to pay the entire amount in advance. For example, state law in California limits the advance payment that must be given to a contractor prior to beginning work to ten percent of the total contract price.

Permits will be needed from the jurisdiction to begin work, and obtaining them might be done by you or by the construction professionals you have engaged. The local building jurisdiction office will be a very busy and perhaps even a confusing place to obtain permits and information needed to initiate repairs after a major earthquake. The specific rules applying to the reconstruction or repair of your building will undoubtedly be somewhat different than those used in nondisaster situations. Since some of the requirements may be waived (e.g., fees) and others may be specially imposed (e.g., soil or engineering reports) under these circumstances, you should definitely inquire about what rules apply to your specific location and extent of damage. There may be situations that require an older structure to be repaired using current standards for earthquake resistance rather than those used in the original construction. Use of these current methods can substantially reduce the damage caused by future earthquakes, but this will also usually raise the cost of the repair work.

In the aftermath of most disasters where large numbers of buildings are damaged or destroyed, there are likely to be opportunists posing as legitimate contractors willing to assist you in making needed repairs. The best way to avoid these unscrupulous or illegal operators is to ask for proof of both a current state contractor's license and a certificate of worker's compensation insurance. Although this evidence cannot necessarily ensure top quality workmanship, it certainly will avoid other problems that can result from using the services of either uninsured or unlicensed individuals.

If you are attempting to make repairs on your own without the help of contractors, be aware that you will still need a building permit or similar authorization and that you must request the required inspections for that work. Certain minor cosmetic work (e.g., replacing or patching cracked interior wall finish materials) may be exempted, but other repairs (e.g., fixing chimneys, or repairing any damaged structural members) will likely need a permit. While this may seem bothersome, it will help prevent challenges to the adequacy of the work performed when a property is sold or if insurance claims are made.

A.3 Guidelines for Securing Disaster Assistance

The details, limitations, and eligibility requirements for various types of federal, state, or local aid cannot be specifically listed here, because they are subject to change and are often unique to the situation and the disaster. The best source for current information on these subjects will be the locally established disaster application center.

If earthquake-specific coverage is included in an insurance policy covering your property, your first step should be to contact the claims office of the insurance company. You may also be eligible to make a claim for federal or state assistance to cover uninsured losses or deductibles that may apply to your coverage. Whether or not insurance coverage applies to your losses, you should document all the visible damage with photographs and a narrative of what each shows. Also keep a record of the nature, extent, and cost of any emergency repairs made by yourself or others immediately after the earthquake and any other expenses related to the earthquake damage or the loss of use of the building. The importance of such documentation cannot be over-stressed, because the full amount of any insurance settlement or financial assistance that may be available in the form of low interest loans and, occasionally, grants, will require significant proof regarding damages, repairs, and expenses.

Damage to your home may be severe enough to require your family to relocate to temporary or even long-term alternative housing. Following a disaster, the local chapter of the American Red Cross is responsible for providing emergency shelters at locations such as schools. Information on the exact locations can be obtained from the Red Cross or local government authorities. Other local nonprofit and community service organizations may also be providing aid including food and clothing, and state and county health departments may offer personal counseling.

If a presidential declaration of a disaster is made, the Federal Emergency Management Agency (FEMA), or other cognizant federal agency, in conjunction with local government, will establish a local Disaster Application Center (DAC). These centers will normally begin functioning several days to a week after a disaster, and their locations will be announced by newspapers and other media. Representatives from local, state and federal agencies with disaster relief responsibility will be assigned to these centers.

FEMA, or other cognizant federal agency, will address the needs of owners or tenants facing long-term displacement from their principal housing. This assistance can take several forms but often is provided by vouchers that cover a portion of the costs to obtain alternative existing housing. Business owners will be able to apply for loans from the federal Small Business Administration (SBA) at the Disaster Application Center. There is also a program for homeowners. These loans are normally made at below-market interest rates and can be applied to repairing or replacing a building; however, loan eligibility is based on the ability of the borrower to repay. To verify reported damages and assess the amount of financial assistance you may be eligible to receive, representatives from the jurisdiction processing your assistance claim will normally inspect your building.